

PERMIT CHECK LIST

Date: February 29, 2008

Source/Facility Name: City of Harrisonburg – Resource Recovery Facility

Registration No.: 81016 Plant ID No.: 660-0118

Source Location

Address: 1630 Driver Road

City: Harrisonburg State: Virginia Zip: 22601

Source Mailing Address

Address: 345 South Main Street

City: Harrisonburg State: Virginia Zip: 22801

Greenfield? YES ☐ NO ☒

Current Source Classification (if not a Greenfield)

Minor ☐ Synthetic Minor ☐ PSD Major ☐ Title V Major ☒

Permit Action: (Describe new/modified equipment and/or processes, include maximum rated capacities)

Amend the existing new source review permit to include the additional operating load restriction for the municipal waste combustion units.

Permit Action Type

New Source Review

Minor ☐ State Major ☐ PSD Major ☐ Exemption ☐ General Permit ☐
Install ☐ Construct ☐ Modify ☐ Relocate ☐
Admin Amend ☐ Minor Amend ☐ Sig Amend ☒

State Operating Permit

New ☐ Admin Amend ☐ Minor Amend ☐ Significant Amendment ☐

Permit includes all emissions units at source YES ☒ NO ☐ Exemption/NA ☐

After this action the source is:

Major (A) ☒ Minor (B) ☐ Synthetic Minor (SM) ☐ PSD ☐

Permit Application Review

☒ Permit application submitted or ☐ Letter Request
YES ☒ NO ☐ NA ☐ Document Certification Form received with Form 7
YES ☐ NO ☐ NA ☒ Confidential information. If yes, checklist completed/letter sent.
YES ☐ NO ☐ NA ☒ Public copy received
YES ☐ NA ☒ Copy of letter from local official for greenfield, or major modified sources
YES ☐ NA ☒ Greenfield Site Evaluation
YES ☒ NO ☐ NA ☐ Permit **replaces** other permit(s). If yes, list permit dates: November 18, 2005

Regulatory Review

BACT Determination (check one):

☐ Control strategy meets BACT.

Comments:

☒ Exemption/General Permit/SOP or **Amendment** - BACT not applicable.

Rule Applicability

YES ☐ NO ☒ NSPS/MACT/NESHAPS Applicability: If Y, Subpart(s):

NSPS ☐ Subpart: MACT ☐ Subpart: NESHAPS ☐ Subpart:

Comments:

YES ☐ NO ☒ Existing Rule(s) applicability: If Y, Rule(s):

Comments:

Toxic Pollutants (check one):

☐ Exempt ☐ in compliance with 9 VAC 5-60-320 ☒ not evaluated

Comments:

Modeling (check one):

☐ Attached
☐ Copy of approval letter from modeling section
☒ No modeling required by agency policy (< modeling significance levels, etc.)

Comments:

Site Inspected YES ☒ NO ☐ If yes, inspection date: August 27, 2007
Calculation sheet(s) attached YES ☐ NO ☐ NA ☒
NSR Netting YES ☐ NO ☐ NA ☒

Comments:

Pollution Prevention

Permit contains the following pollution prevention provisions (check all that apply):

- ☐ Administrative controls, material/fuel limitations or work practices that reduce or eliminate air pollution
- ☐ Emission/throughput limitations to avoid add-on controls
- ☐ Emission/operating limitations to avoid regulatory requirements (PSD, TV, State Major, MACT, 112g)
- ☐ Reporting Requirements. If checked, frequency is [Quarterly, Semi-annual, Annual, Other]

Public Participation

Public Notice Required YES ☒ NO ☐ NA ☐ If yes, Public Notice Date: March 27, 2008
Public Comments YES ☐ NO ☐ NA ☒
Public Hearing Required YES ☒ NO ☐ NA ☒ If yes, Public Hearing Date: May 1, 2008

Other Comments and Final Recommendations (attach memo or list below):

Items to explain in comment section of checklist, or memo as applicable:

- 1) Unusual circumstances, calculations, or analysis.
- 2) Central Office input.
- 3) APM discussions and input.
- 4) Boilerplate deviations, and if superseding existing permit(s), changes from previous permit(s).
- 5) Explanation if complete date is not the same as the last information submitted.
- 6) Special compliance monitoring or recordkeeping requirements (initial or continuous)
- 7) Rationale for calculation of Uncontrolled/Controlled Emissions and/or Potential-to-Emit.

Background:

1. Annual stack testing was conducted on the Municipal Waste Combustion Units (MWCUs) at Harrisonburg Resource Recovery Facility (HRRF) August 14-18, 2006, as required by the existing permit. The stack test report indicated that measured hydrogen chloride (HCl) emissions for Unit 1 were 71.15 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 121.77 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 84.54% and 71.10%, respectively. Condition IV.A.7. of HRRF's Title V permit and Condition 17 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005 limit HCl emissions to 25 parts per million by dry volume (ppm_{dv}) or 95% reduction of potential HCl emissions and 2.58 lb/hr. The August stack test results also indicated that measured HCl emissions for Unit 1 were 4.88 lb/hr and measured HCl emissions for Unit 2 were 7.23 lb/hr. HRRF communicated that the HCl control system appeared to have failed due to excessive moisture in the baghouse resulting from recent boiler maintenance, poor lime caking, and bag leaks. On October 19, 2006, DEQ issued a Notice of Violation.

2. HRRF repeated stack testing for HCl on November 15-17, 2006. The stack test report indicated that measured HCl emissions for Unit 1 were 31.2 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 35.2 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 92.5% and 91.9%, respectively. The test was run at an average feed water rate of 29,978 lb/hr for Unit 1 and 32,062 lb/hr for Unit 2. During a meeting with DEQ on December 18, 2006, HRRF communicated that the August and November stack tests were conducted to demonstrate compliance under abnormally high feed water flow conditions. These high feed water flow conditions were not representative of normal operating conditions, but rather represented conditions experienced infrequently due to sudden, unexpected increases in steam demand. Additionally, such conditions did not represent greater waste loading to the MWCUs, but rather indicated a rapid influx of make-up water to generate steam. HRRF and DEQ concluded that feed water did not appear to be a reliable surrogate for waste load, and HRRF decided to explore the option of measuring steam flow rather than feed water. HRRF also decided to run a third stack test for HCl at more representative feed water conditions.
3. HRRF conducted the third stack testing for HCl stack testing on January 10, 2007 and submitted the results in a report dated February 15, 2007. However, the report indicated that the test was run at an average feed water flow rate of 24,380 lbs/hr, which was approximately 85% of the maximum average feed water flow rate (28,680 lb/hr) observed during 2006. Previous stack tests were run at feed water flow rates between 29,630 and 35,098 lb/hr. For the January retest, the report indicated that measured HCl emissions for Unit 1 were 15.5 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 11.7 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 97.7% and 97.1%, respectively. These values were in compliance with applicable limits at the tested operating rate; however, DEQ questioned the operating rate at which the test was conducted.
4. In a letter dated February 15, 2007, HRRF reiterated the assertion that the previous stack tests in August and November did not comply with HCl limits because the MWCUs were run above normal operating conditions to compensate for problems with the feed water surrogate. According to HRRF, short-term feed water fluctuations ("spikes") occur due to variable steam demand, distances the steam must travel, and inconsistencies in the waste. HRRF attempted to demonstrate compliance at an abnormally high feed water rate to compensate for these spikes to avoid noncompliance with the waste load monitoring requirements of 40 CFR 60 Subpart AAAA. HRRF provided data from the January stack test showing the relative stability of steam flow versus feed water flow as an indicator of waste load. Note that steam flow was measured with a type of meter not approved by EPA. During March 2007, HRRF installed EPA-approved steam flow meters for the purpose of using steam as a surrogate for waste load, rather than feed water.
5. In a letter dated April 2, 2007, HRRF expressed its intent to stack test within 60 days to establish steam as the primary surrogate for load. HRRF also expressed its intent to operate above the feed water rate (24,380 lb/hr) at which compliance was demonstrated during the January retest. HRRF asserted that previous test data could be used to show that operation at a feed water rate of 27,500 lb/hr or less would provide assurance of compliance with the applicable HCl limits.
6. HRRF repeated the HCl stack testing from May 29-June 1, 2007, and submitted the results in a report dated July 5, 2007. The report indicated that the test for Unit 1 was run at 26,871 lbs/hr feed water and 27,572 lbs/hr steam flow, and the test for Unit 2 was run at 28,858 lbs/hr feed water and 27,880 lbs/hr steam flow. The report indicated that measured HCl emissions for Unit 1 were 0.16 lb/hr and 2.7 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 0.77 lb/hr and 13.3 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 99.6% and 98.0%, respectively. These values were in compliance with applicable limits.

7. Given that HRRF tested above the maximum operating rate during the August and November tests and below the maximum operating rate during the January test, the conditions for these tests do not appear to meet the requirements of Condition 49 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005 and Title V Condition IV.D.3., which state that compliance testing for HCl must be performed while the MWCU is operating at full load. Additionally these tests do not appear to meet the requirements of Condition 50 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005 and Title V Condition IV.D.4., which states that tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, which calls for testing under conditions that are based on representative performance of the source.
8. Given that HRRF did not demonstrate compliance with HCl limits until the June test, which was later than 13 months after the previous passing stack test (August 25, 2005), the test conditions do not appear to meet the requirements of Condition 50 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005 and Title V Condition IV.D.4., which state that annual stack tests shall be conducted on each MWCU stack (Ref. Nos. 1 and 2) for dioxins/ furans, cadmium, lead, mercury, opacity, particulate matter, nitrogen oxides, hydrogen chloride, and fugitive ash no later than 13 months after the previous stack test.
9. HRRF's last annual stack test for which compliance was demonstrated for HCl was conducted on August 25, 2005. Given that the stack test to establish steam as a primary surrogate was completed on June 1, 2007, and the stack test yielded results in compliance with applicable HCl requirements, the period of noncompliance appears to extend from September 25, 2006, (13 months after the previous passing stack test) until June 1, 2007.
10. HRRF and City of Harrisonburg representatives met with DEQ officials on October 2, 2007 to discuss the allegations of violation and remedial measures taken up to the date of the meeting and agreed in principle to the corrective action terms to be set out in the Consent Order. City of Harrisonburg entered a Consent Order dated November 21, 2007 that included steps to correct MWCUs's noncompliance (See attached Consent Order). The CO included a requirement to modify the minor NSR permit and Title V permit to include additional load restriction on MWCUs.

Permit Action:

On January 16, 2008, City of Harrisonburg submitted an air permit application to modify its minor NSR permit and Title V permit to comply with the requirements set out in the Consent Order dated November 21, 2007 as described above. This permit action will amend the facility's existing minor NSR permit dated November 18, 2005.

The existing permit requires that the facility shall not operate the MWCU at loads greater than 110 percent of the maximum demonstrated unit load of the MWCU (4-hour block average), as specified under "Definitions" in 40 CFR §60.1465. The maximum demonstrated load of a municipal waste combustion unit is defined in 40 CFR §60.1465 as the highest 4-hour block arithmetic average municipal waste combustion unit load achieved during 4 consecutive hours in the course of the most recent dioxin/furan stack test that demonstrates compliance with the applicable emission limit for dioxins/furans specified in the permit. The existing permit also requires that that compliance testing for HCl must be performed while the MWCU is operating at full load.

As described above, the MWCUs at HRRF did not demonstrate compliance with the applicable HCl limits while operating at full load. The Consent Order dated November 21, 2007, requires that the MWCUs shall not be operated at loads that exceed the maximum demonstrated unit load of the MWCU (4-hour block average)

during the most recent HCl stack test that demonstrates compliance with the applicable HCl emission limits. The following changes have been made to the existing NSR permit dated November 18, 2005 to include additional operating load restriction for the MWCUs as indicated in Consent Order dated November 21, 2007. Please note the condition numbers refer to the proposed permit. Also, the permit updates fuel quality reporting and recordkeeping requirements as described below.

Introduction: Includes the most recent application date for this permit action.

Condition 1: The reference to NESHAP, Subpart DDDDD for two natural gas/distillate oil fired boilers is no longer included as the Industrial, Commercial and Institutional Boilers and Process Heaters Maximum Achievable Control Technology regulation (Boiler MACT) contained in 40 CFR 63, Subpart DDDDD has been vacated in its entirety by the U.S. Court of Appeals.

Condition 23.b: The additional operating restriction for the MWCUs as listed in Consent Order dated November 21, 2007 is included.

Condition 57: The quarterly fuel reporting is changed to semi-annual fuel reporting. The NSPS Subpart Dc allows the semi-annual fuel reporting.

Condition 58.b: Daily throughput of natural gas and distillate oil to boilers (Ref. Nos. 1 and 2) is not required. The NSPS Subpart Dc only requires recordkeeping for monthly throughput of natural gas and distillate oil for affected units.

Condition 58.n: The recordkeeping requirements of operating load of each MWCU (Ref. Nos. 1 and 2) to demonstrate compliance with the requirements in Condition 23.b is included.

Please note that the permit has been also updated to reflect current boilerplate language. The above requested changes meet the requirements of 9 VAC 5-80-1290 for a significant amendment to a NSR permit.

Public Participation:

The public participation requirements of 9 VAC 5-80-1170 was followed. DEQ solicited written public comments on the proposed significant amendment by placing a newspaper advertisement in the Daily News Record on March 27, 2008. The public hearing is scheduled to be held on May 1, 2008 and the public comment period will expire on May 16, 2008.

Title V Permit Modification:

Along with the amendment of minor NSR permit, City of Harrisonburg also submitted an application for Title V permit modification. The facility's existing Title V permit expires on January 14, 2009 and the application for renewal of the Title V permit is due on July 14, 2008. The facility has indicated that it will submit the application for Title V renewal earlier than the due date (most likely in April 2008). The additional operating load restriction on the MWCUs will be included when the facility's Title V permit will be renewed rather than modifying the Title V permit at this time.

Recommendation: Pending public participation requirements.

Environmental Engineer's Signature:	<u>DRAFT</u>	Date:
Air Permit Manager's Signature:	<u>DRAFT</u>	Date:



COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

VALLEY REGIONAL OFFICE

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L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Amy Thatcher Owens
Regional Director

STATE AIR POLLUTION CONTROL BOARD ENFORCEMENT ACTION

ORDER BY CONSENT ISSUED TO

Harrisonburg Resource Recovery Facility

Registration #: 81016

SECTION A: Purpose

This is a Consent Order issued under the authority of Va. Code §§ 10.1-1187, -1184, -1307(D), -1309, and -1316(C), between the State Air Pollution Control Board and Harrisonburg Resource Recovery Facility, for the purpose of resolving certain alleged violations of environmental law and regulations.

SECTION B: Definitions

Unless the context clearly indicates otherwise, the following words and terms have the meaning assigned to them below:

1. "Va. Code" means the Code of Virginia (1950), as amended.
2. "Board" means the State Air Pollution Control Board, a permanent citizens' board of the Commonwealth of Virginia as described in Code §§ 10.1-1301 and 10.1-1184.
3. "Department" or "DEQ" means the Department of Environmental Quality, an agency of the Commonwealth of Virginia as described in Va. Code § 10.1-1183.
4. "Director" means the Director of the Department of Environmental Quality.

5. "Order" means this document, also known as a Consent Order.
6. "HRRF" means Harrisonburg Resource Recovery Facility, a facility that produces steam, chilled water, and electricity from the combustion of municipal solid waste.
7. "Facility" means the Harrisonburg Resource Recovery Facility located at 1630 Driver Drive, Harrisonburg, Virginia.
8. "VRO" means the Valley Regional Office of DEQ, located at 4411 Early Road, P.O. Box 3000, Harrisonburg, Virginia 22801.
9. "CFR" means Code of Federal Regulations.

SECTION C: Findings of Facts and Conclusions of Law

1. Annual stack testing was conducted on the Municipal Waste Combustion Units (MWCUs) at HRRF August 14-18, 2006, as required by Condition IV.D.4. of HRRF's Title V permit dated January 14, 2004 (amended on December 21, 2005).
2. DEQ received the August stack test results in a report dated September 15, 2006. The report indicated that measured hydrogen chloride (HCl) emissions for Unit 1 were 71.15 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 121.77 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 84.54% and 71.10%, respectively. Condition IV.A.7. of HRRF's Title V permit, Condition 17 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005, and 40 CFR §60.1215 limit HCl emissions to 25 parts per million by dry volume (ppm_{dv}) or 95% reduction of potential HCl emissions:
3. The August stack test results also indicated that measured HCl emissions for Unit 1 were 4.88 lb/hr and measured HCl emissions for Unit 2 were 7.23 lb/hr. Condition IV.A.9. of HRRF's Title V permit and Condition 19 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005, limit HCl emissions to 2.58 lb/hr.
4. HRRF communicated that the HCl control system appeared to have failed due to excessive moisture in the baghouse resulting from recent boiler maintenance, poor lime caking, and bag leaks.
5. On September 26, 2006, HRRF submitted HCl dispersion modeling results based on the HCl emission rates observed during the stack test. The modeled HCl concentration for both MWCUs combined was 72.62 ug/m³, below Virginia's significant ambient air concentration guideline of 187.5 ug/m³.
6. On October 19, 2006, DEQ issued a Notice of Violation to HRRF for the observations listed in items 2 and 3 above.

7. On November 3, 2006, HRRF notified DEQ that repeat stack testing for HCl would be conducted November 15-17, 2006. HRRF indicated that the retest would follow the original protocol submitted to DEQ on July 13, 2006.
8. DEQ received the November stack test results in a report dated February 15, 2007. The report indicated that measured HCl emissions for Unit 1 were 31.2 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 35.2 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 92.5% and 91.9%, respectively. The test was run at an average feed water rate of 29,978 lb/hr for Unit 1 and 32,062 lb/hr for Unit 2. Condition IV.A.7. of HRRF's Title V permit, Condition 17 of HRRF's Stationary Source Permit to Modify and Operate dated November 18, 2005, and 40 CFR §60.1215 limit HCl emissions to 25 ppm_{dv} or 95% reduction of potential HCl emissions.
9. During a meeting with DEQ on December 18, 2006, HRRF communicated that the August and November stack tests were conducted to demonstrate compliance under abnormally high feed water flow conditions. These high feed water flow conditions were not representative of normal operating conditions, but rather represented conditions experienced infrequently due to sudden, unexpected increases in steam demand. Additionally, such conditions did not represent greater waste loading to the MWCUs, but rather indicated a rapid influx of make-up water to generate steam. HRRF and DEQ concluded that feed water did not appear to be a reliable surrogate for waste load, and HRRF decided to explore the option of measuring steam flow rather than feed water. HRRF also decided to run a third stack test for HCl at more representative feed water conditions.
10. HRRF repeated the HCl stack testing on January 10, 2007 and submitted the results in a report dated February 15, 2007. However, the report indicated that the test was run at an average feed water flow rate of 24,380 lbs/hr, which was approximately 85% of the maximum average feed water flow rate (28,680 lb/hr) observed during 2006. Previous stack tests were run at feed water flow rates between 29,630 and 35,098 lb/hr. For the January retest, the report indicated that measured HCl emissions for Unit 1 were 15.5 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 11.7 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 97.7% and 97.1%, respectively. These values were in compliance with applicable limits at the tested operating rate; however, DEQ questioned the operating rate at which the test was conducted.
11. In a letter dated February 15, 2007, HRRF reiterated the assertion that the previous stack tests in August and November did not comply with HCl limits because the MWCUs were run above normal operating conditions to compensate for problems with the feed water surrogate. According to HRRF, short-term feed water fluctuations ("spikes") occur due to variable steam demand, distances the steam must travel, and inconsistencies in the waste. HRRF attempted to demonstrate compliance at an abnormally high feed water rate to compensate for these spikes to avoid noncompliance with the waste load monitoring requirements of 40 CFR 60 Subpart AAAA. HRRF provided data from the January stack test showing the relative stability of steam flow versus feed water flow as an indicator of waste load. Note that steam flow was measured with a type of meter not approved by EPA.

12. During March 2007, HRRF installed EPA-approved steam flow meters for the purpose of using steam as a surrogate for waste load, rather than feed water.
13. In a letter dated April 2, 2007, HRRF expressed its intent to stack test within 60 days to establish steam as the primary surrogate for load. HRRF also expressed its intent to operate above the feed water rate (24,380 lb/hr) at which compliance was demonstrated during the January retest. HRRF asserted that previous test data could be used to show that operation at a feed water rate of 27,500 lb/hr or less would provide assurance of compliance with the 25 ppm_{dv} HCl standard.
14. HRRF repeated the HCl stack testing from May 29-June 1, 2007, and submitted the results in a report dated July 5, 2007. The report indicated that the test for Unit 1 was run at 26,871 lbs/hr feed water and 27,572 lbs/hr steam flow, and the test for Unit 2 was run at 28,858 lbs/hr feed water and 27,880 lbs/hr steam flow. The report indicated that measured HCl emissions for Unit 1 were 0.16 lb/hr and 2.7 ppm_{dv} at 7% O₂. Measured HCl emissions for Unit 2 were 0.77 lb/hr and 13.3 ppm_{dv} at 7% O₂. The tested HCl reduction efficiencies for Units 1 and 2 were 99.6% and 98.0%, respectively. These values were in compliance with applicable limits.
15. Given that HRRF tested above the maximum operating rate during the August and November tests and below the maximum operating rate during the January test, the conditions for these tests do not appear to meet the requirements of 40 CFR §60.1300 and Title V Condition IV.D.3., which state that compliance testing for HCl must be performed while the MWCU is operating at full load. Additionally these tests do not appear to meet the requirements of Title V Condition IV.D.4., which states that tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30, which calls for testing under conditions that are based on representative performance of the source.
16. Given that HRRF did not demonstrate compliance with HCl limits until the June test, which was later than 13 months after the previous passing stack test (August 25, 2005), the test conditions do not appear to meet the requirements of Title V Condition IV.D.4. and 40 CFR §60.1295, which state that annual stack tests shall be conducted on each MWCU stack (Ref. Nos. 1 and 2) for dioxins/furans, cadmium, lead, mercury, opacity, particulate matter, nitrogen oxides, hydrogen chloride, and fugitive ash no later than 13 months after the previous stack test.
17. HRRF's last annual stack test for which compliance was demonstrated for HCl was conducted on August 25, 2005. Given that the stack test to establish steam as a primary surrogate was completed on June 1, 2007, and the stack test yielded results in compliance with applicable HCl requirements, the period of noncompliance appears to extend from September 25, 2006, (13 months after the previous passing stack test) until June 1, 2007.
18. HRRF and City of Harrisonburg representatives met with DEQ officials on October 2, 2007 to discuss the allegations of violation and remedial measures taken up to the date of the meeting and agreed in principle to the corrective action terms set out in Appendix A to this Order and to the payment of a civil penalty in accordance with regulations set out by the State Air Control Board.

SECTION D: Agreement and Order

By virtue of the authority granted State Air Pollution Control Board pursuant to Va. Code §§ 10.1-1186(2), 10.1-1309, and 10.1-1316(C), orders HRRF, and HRRF voluntarily agrees to the following conditions in settlement of the violations cited in this Order:

1. HRRF agrees to a civil charge of **\$13,119.00** in settlement of the violations cited in this Order, to be paid as follows: HRRF shall pay **\$3,360.00** of the civil charge within 30 days of the effective date of this Order. Payment must indicate that the civil charge is paid pursuant to this Order, and shall include HRRF's Federal Identification Number. Payment shall be by check, certified check, money order, or cashier's check payable to **"Treasurer of the Commonwealth of Virginia"** and sent to:

Receipts Control
Department of Environmental Quality
Post Office Box 1104
Richmond, Virginia 23218

In addition, HRRF shall satisfy the remaining **\$9,839.00** of the civil charge by satisfactorily completing the Supplemental Environmental Project (SEP) described in Appendix B of this Order.

2. HRRF shall comply with the terms and conditions as set out in Appendix A of this Order.
3. The net project cost of the SEP to HRRF shall not be less than the amount set forth in Paragraph D.3. If it is, HRRF shall pay the remaining amount in accordance with Paragraph D.1. of this Order, unless otherwise agreed to by the Department. "Net project costs" means the net present after-tax cost of the SEP, including tax savings, grants, and first-year cost reductions and other efficiencies realized by virtue of project implementation. If the proposed SEP is for a project for which the party will receive an identifiable tax savings (e.g., tax credits for pollution control or recycling equipment), grants, or first-year operation cost reductions or other efficiencies, the net project cost shall be reduced by those amounts. The costs of those portions of SEPs that are funded by state or federal low-interest loans, contracts, or grants shall be deducted.
4. By signing this Order, HRRF certifies that it has not commenced performance of the SEP.
5. HRRF acknowledges that it is solely responsible for completing the SEP project. Any transfer of funds, tasks, or otherwise by HRRF to a third party, shall not relieve HRRF of its responsibility to complete the SEP as described in this Order.
6. In the event it publicizes the SEP or the SEP results, HRRF shall state in a prominent manner that the project is part of a settlement for an enforcement action with DEQ.
7. The Department has the sole discretion to:

- a. Authorize any alternate, equivalent SEP proposed by the Facility; and
 - b. Determine whether the SEP, or alternate SEP, has been completed in a satisfactory manner.
8. Should the Department determine that HRRF has not completed the SEP, or alternate SEP, in a satisfactory manner; the Department shall so notify HRRF in writing. Within 30 days of being notified, HRRF shall pay the amount specified in Paragraph D.3., above, as provided in Paragraph D.1., above.

SECTION E: Administrative Provisions

1. The Board may modify, rewrite, or amend the Order with the consent of HRRF, for good cause shown by HRRF, or on its own motion after notice to HRRF and its opportunity to be heard.
2. This Order addresses and resolves only those violations specifically identified herein. This Order shall not preclude the Board or the Director from taking any action authorized by law, including but not limited to: (1) taking any action authorized by law regarding any additional, subsequent, or subsequently discovered violations; (2) seeking subsequent remediation of the Facility as may be authorized by law; or (3) taking subsequent action to enforce this Order. This Order shall not preclude appropriate enforcement actions by other federal, state, or local regulatory authorities for matters not addressed herein.
3. For purposes of this Order and subsequent actions with respect to this Order, HRRF admits to the allegations in Section C of this Order.
4. HRRF consents to venue in the Circuit Court of the City of Richmond for any civil action taken to enforce the terms of this Order.
5. HRRF declares it has received fair and due process under the Administrative Process Act, Va. Code §§ 2.2-4000 *et seq.*, and the Air Pollution Control Law and it waives the right to any hearing or other administrative proceeding authorized or required by law or regulation, and to any judicial review of any issue of fact or law contained herein. Nothing herein shall be construed as a waiver of the right of HRRF to any administrative proceeding for, or to judicial review of, any action taken by the Board to enforce this Order.
6. Failure by HRRF to comply with any of the terms of this Order shall constitute a violation of an order of the Board. Nothing herein shall waive the initiation of appropriate enforcement actions or the issuance of additional orders as appropriate by the Board or the Director as a result of such violations. Nothing herein shall affect appropriate enforcement actions by any other federal, state, or local regulatory authority.
7. If any provision of this Order is found to be unenforceable for any reason, the remainder of the Order shall remain in full force and effect.

8. HRRF shall be responsible for failure to comply with any of the terms and conditions of this Order unless compliance is made impossible by earthquake, flood, other acts of God, war, strike, or such other occurrence. HRRF shall show that such circumstances were beyond its control and not due to a lack of good faith or diligence on its part. HRRF shall notify the DEQ Regional Director in writing when circumstances are anticipated to occur, are occurring, or have occurred that may delay compliance or cause noncompliance with any requirement of the Order. Such notice shall set forth:
- a. the reasons for the delay or noncompliance;
 - b. the projected duration of any such delay or noncompliance;
 - c. the measures taken and to be taken to prevent or minimize such delay or noncompliance; and
 - d. the timetable by which such measures will be implemented and the date full compliance will be achieved.

Failure to so notify the Regional Director within 24 hours of learning of any condition above, which HRRF intends to assert will result in the impossibility of compliance, shall constitute a waiver of any claim to inability to comply with a requirement of this Order.

9. This Order is binding on the parties hereto, their successors in interest, designees and assigns, jointly and severally.
10. This Order shall become effective upon execution by both the Director or his designee and HRRF. Notwithstanding the foregoing, HRRF agrees to be bound by any compliance date which precedes the effective date of this Order.
11. This Order shall continue in effect until:
- a. HRRF petitions the Director or his designee to terminate the Order after it has completed all requirements of the Order and the Director or his designee approves the termination of the Order; or
 - b. The Director or the Board may terminate this Order in his or its whole discretion upon 30 days' written notice to HRRF.

Termination of this Order, or of any obligation imposed in this Order, shall not operate to relieve HRRF from his obligation to comply with any statute, regulation, permit condition, other order, certificate, certification, standard, or requirement otherwise applicable.

12. By its signature below, HRRF voluntarily agrees to the issuance of this Order.

And it is so ORDERED this day of 21st November, 2007

Amy Thatcher Owens

Amy Thatcher Owens, Regional Director
Valley Regional Office
Department of Environmental Quality

HRRF voluntarily agrees to the issuance of this Order.

By: Kurt D. Hodges

Date: 11/16/07

Commonwealth of Virginia

City/County of Harrisonburg

The foregoing document was signed and acknowledged before me this 16th day of
November, 2007, by Kurt D. Hodges, who is
(name)

City Manager of HRRF, on behalf of HRRF.
(title)

Laura E. Bowers
Notary Public 7109015

My commission expires: February 28, 2011

APPENDIX A

In addition to the foregoing, the Virginia State Air Pollution Control Board orders and HRRF agrees to implement this corrective action plan as an additional provision to this Order.

HRRF shall submit permit applications by December 14, 2007, to incorporate the following statement (in italics) into Condition 24.a. of its Stationary Source Permit to Modify and Operate (dated November 18, 2005) and into Condition IV.A.14.a. of its Title V permit (dated January 14, 2004):

Condition 24.a. and Condition IV.A.14.a.

The following operating practice requirements apply for the MWCUs (Ref. Nos. 1 and 2):

The Permittee shall not operate the MWCU at loads greater than 110 percent of the maximum demonstrated unit load of the MWCU (4-hour block average), as specified under "Definitions" in 40 CFR §60.1465. *Under no circumstances shall the Permittee operate the MWCU at loads that exceed the maximum demonstrated unit load of the MWCU (4-hour block average) during the most recent Hydrogen Chloride stack test that demonstrates compliance with the applicable emission limit for Hydrogen Chloride specified in 40 CFR §60.1215.*

APPENDIX B

SUPPLEMENTAL ENVIRONMENTAL PROJECT

In addition to the foregoing, HRRF shall perform the SEP identified below in the manner specified in this Appendix.

1. HRRF shall construct a facility that will provide local citizens with a collection and temporary holding area for Household Hazardous Waste (HHW). Due to staffing and safety concerns, the facility will only accept easily identifiable HHW including but not limited to herbicides, pesticides, oil-based paints, petroleum products, and batteries. These substances shall be managed in accordance with the Virginia Solid and Hazardous Waste Management Regulations. The facility shall be open to the public at least one day per month, but may, at the discretion of Harrisonburg or Rockingham County officials, be open more frequently. The facility shall be located at the Rockingham County Landfill, the Harrisonburg Recycling Center, or other DEQ-approved site.
2. The SEP shall be completed within 180 days of the effective date of this Order.
3. HRRF shall submit a written final report on the SEP, verifying that the SEP has been completed in accordance with the terms of this Order, and certified by a responsible corporate officer. HRRF shall submit the final report and certification to DEQ within 30 days of the SEP completion date.
4. If the SEP has not or cannot be completed as described in the Order, HRRF shall notify DEQ in writing no later than the SEP completion deadline established in Condition 2 above. Such notification shall include:
 - a. an alternate SEP proposal, or
 - b. payment of the amount specified in Paragraph D.3. as described in Paragraph D.1.
5. HRRF hereby consents to reasonable access by DEQ to property or documents for verifying progress or completion of the SEP.
6. HRRF shall submit to DEQ written verification of the final overall and net project cost of the SEP in the form of a certified statement itemizing costs, invoices and proof of payment, and/or similar documentation with the written final report described in Condition 3 above. For the purposes of this submittal, net project costs can be either the actual, final net project costs or the projected net project costs if such projected net project costs statement is accompanied by a CPA certification or certification from HRRF's Chief Financial Officer concerning the projected tax savings, grants, or first-year operation cost reductions or other efficiencies.
7. Documents to be submitted to DEQ, other than the civil charge payment described in Section D of the Order, shall be sent to Ms. Kimberly Beth Bryant, DEQ Valley Regional Office, P.O. Box 3000, Harrisonburg, VA 22801.

DRAFT
STATIONARY SOURCE PERMIT TO MODIFY AND OPERATE

**This permit includes designated equipment subject to
New Source Performance Standards (NSPS).**

This permit replaces your permit dated November 18, 2005.

In compliance with the Federal Clean Air Act and the Commonwealth of Virginia
Regulations for the Control and Abatement of Air Pollution,

City of Harrisonburg
345 South Main Street
Harrisonburg, VA 22801
Registration No.: 81016
Plant ID No.: 51-660-0118

is authorized to modify and operate

a resource recovery facility

located at

1630 Driver Road, Harrisonburg, Virginia

in accordance with the Conditions of this permit.

Approved on November 18, 2005

Amendment date DRAFT

Deputy Regional Director, Valley Region

Permit consists of 37 pages.
Permit Conditions 1 to 65.
Source Testing Report Format.

INTRODUCTION

This permit approval is based on the permit applications dated June 25, 2002, March 8, 2005, May 9, 2005 and December 13, 2007, including amendment information dated September 5, 2002, September 11, 2002, September 19, 2002, October 1, 2002, October 9, 2002, October 15, 2002, November 12, 2002, January 21, 2003, January 30, 2003 and July 15, 2005. Any changes in the permit application specifications or any existing facilities which alter the impact of the facility on air quality may require a permit. Failure to obtain such a permit prior to construction may result in enforcement action.

Words or terms used in this permit shall have meanings as provided in 9 VAC 5-10-10 of the State Air Pollution Control Board Regulations for the Control and Abatement of Air Pollution. The regulatory reference or authority for each condition is listed in parentheses () after each condition.

Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact.

The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.2-3700 through 2.2-3714 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

PROCESS REQUIREMENTS

1. **Equipment List** - Equipment to be modified at this facility consists of:

- two municipal waste combustion units (MWCU) (Ref. Nos. 1 and 2), Model Barlow Projects IFB-05-02, each rated at 100 tons/day (NSPS, Subpart AAAA);

Previously permitted equipment at this facility consists of:

- two natural gas/distillate oil-fired boilers, each rated at 43.2 million Btu per hour heat input (Ref. Nos. 3 and 4) (NSPS, Subpart Dc); and
- one distillate oil-fired shredder, Model Kamptech Terminator 5000 Universal Roler, rated at 1.075 million Btu per hour heat input (Ref. No. 8).

Exempt equipment at this facility consists of:

- one natural gas-fired emergency generator rated at 0.91 million Btu per hour heat input (Ref. No. 5); and
- two 12,000 gallon distillate oil storage tanks (Ref. Nos. 6 and 7).

(9 VAC 5-80-1180 D 3)

2. **Emission Controls** – Particulate emissions from each MWCU (Ref. Nos. 1 and 2) shall be controlled by fabric filters. Each fabric filter shall be provided with adequate access for inspection and shall be in operation when the MWCUs are in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition 17).
(9 VAC 5-80-1180)
3. **Emission Controls** – Acid gas (HCl and SO₂) emissions from each MWCU (Ref. Nos. 1 and 2) shall be controlled by a dry-dry flue gas scrubbing system using a hydrated lime sorbent or other DEQ approved suitable sorbent. The scrubber shall be provided with adequate access for inspection and shall be in operation when the MWCUs are in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition 17).
(9 VAC 5-80-1180)
4. **Emission Controls** – Mercury and dioxins/furans emissions from each MWCU (Ref. Nos. 1 and 2) shall be controlled by a carbon injection system. The carbon injection system shall be provided with adequate access for inspection and shall be in operation when the MWCUs are in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition 17).
(9 VAC 5-80-1180)
5. **Emission Controls** – Oxides of nitrogen (NO_x) emissions from the two boilers (Ref. Nos. 3 and 4) shall be controlled by flue gas recirculation (FGR) with low-NO_x burners and good combustion practice.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
6. **Monitoring Devices** – The combustion chamber temperature at each MWCU (Ref. Nos. 1 and 2) shall be maintained at a minimum of 1500°F, when the unit is in normal operating mode (at all times except during startup, shutdown, and malfunction as defined in Condition 17). The combustion chamber shall be equipped with a device to continuously measure the temperature.
(9 VAC 5-80-1180 and 9 VAC 5-50-20 C)

7. **Monitoring Devices** – Each fabric filter shall be equipped with a device to continuously measure the differential pressure drop across the fabric filter. The monitoring device shall be installed, maintained, calibrated and operated in accordance with approved procedures which shall include, as a minimum, the manufacturer's written requirements or recommendations. The monitoring device shall be provided with adequate access for inspection and shall be in operation when the fabric filter is operating.
(9 VAC 5-80-1180 and 9 VAC 5-50-20 C)
8. **Monitoring Device Observation** – The monitoring device used to continuously measure the differential pressure drop across the fabric filter shall be observed by the permittee with a frequency as recommended by the manufacturer. The permittee shall keep a log of the observations from the monitoring device. These records shall be kept onsite in paper copy or electronic format unless DEQ approves another format.
(9 VAC 5-50-50 H)
9. **Monitoring Device** - The permittee shall monitor the load level of each MWCU (Ref. Nos. 1 and 2) by installing, calibrating, maintaining, and operating either a steam flowmeter or a feed water flowmeter. Additionally, the following five requirements must be met:
- Continuously measure and record the measurements of steam (or feed water) in kilograms (or pounds) per hour.
 - Calculate steam (or feed water) flow in 4-hour block averages.
 - Calculate the steam (or feed water) flow rate using the method in “American Society of Mechanical Engineers Power Test Codes: Test Code for Steam Generating Units, Power Test Code 4.1-1964 (R1991),” section 4 (incorporated by reference in 40 CFR §60.17 (h)(2)).
 - Design, construct, install, calibrate, and use nozzles or orifices for flow rate measurements, using the recommendations in “American Society of Mechanical Engineers Interim Supplement 19.5 on Instruments and Apparatus: Application, Part II of Fluid Meters,” 6th Edition (1971), chapter 4 (incorporated by reference in 40 CFR §60.17 (h)(3)).
 - Before each dioxins/furans stack test, or at least once a year, calibrate all signal conversion elements associated with steam (or feed water) flow measurements according to the manufacturer instructions.
- (9 VAC 5-50-410 and 40 CFR §60.1320)
10. **Temperature Monitoring Devices** - The permittee shall install, calibrate, maintain, and operate a device to continuously measure the temperature of the flue gas stream at the inlet of each fabric filter.
(9 VAC 5-50-410 and 40 CFR §60.1325)

11. Carbon Feed Rate Monitoring – The permittee shall monitor the carbon feed rate at each MWCU (Ref. Nos. 1 and 2) by meeting the following three requirements:

- a. Select a carbon injection system operating parameter that can be used to calculate carbon feed rate (for example, screw feeder speed).
- b. During each dioxins/furans and mercury stack test, determine the average carbon feed rate in kilograms (or pounds) per hour. Also, determine the average operating parameter level that correlates to the carbon feed rate. Establish a relationship between the operating parameter and the carbon feed rate in order to calculate the carbon feed rate based on the operating parameter level.
- c. Continuously monitor the selected operating parameter during all periods when the MWCU is operating and combusting waste and calculate the 8-hour block average carbon feed rate in kilograms (or pounds) per hour, based on the selected operating parameter. When calculating the 8-hour block average:
 - i. Exclude hours when the MWCU is not operating.
 - ii. Include hours when the MWCU is operating but the carbon feed system is not functioning correctly.

(9 VAC 5-50-410 and 40 CFR §60.1330)

12. Monitoring Data - The permittee shall comply with the following data collection requirements:

- a. The permittee shall obtain 1-hour arithmetic averages for the following three parameters as described in Conditions 9, 10 and 11:
 - i. Load level of the MWCU.
 - ii. Temperature of the flue gases at the inlet of the particulate matter control device.
 - iii. Carbon feed rate.
- b. The permittee shall obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average.
- c. The permittee shall obtain valid 1-hour averages for, at a minimum, 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste.

- d. The permittee shall be in violation of this data collection requirement if the minimum data required in items a. through c. of this condition are not obtained, and the permittee shall notify DEQ according to Condition 54.e.

(9 VAC 5-50-410 and 40 CFR §60.1335)

**OPERATING/EMISSION LIMITATIONS – MUNICIPAL WASTE COMBUSTION
UNITS (Ref. Nos. 1 and 2)**

13. **Fuel** - The material approved to be incinerated is municipal solid waste, as defined in 40 CFR §60.1465.

(9 VAC 5-80-1180 and 9 VAC 5-50-410)

14. **Throughput** – Each MWCU (Ref. Nos. 1 and 2) shall be charged no more than 34, 675 tons per year of municipal solid waste, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

(9 VAC 5-80-1180 and 40 CFR §60.1045)

15. **Fuel** - The approved fuels for the auxiliary burner at each MWCU (Ref. Nos. 1 and 2) are natural gas and distillate oil. A change in the fuel may require a permit to modify and operate.

(9 VAC 5-80-1180)

16. **Emission Limits** - Emissions from the operation of each MWCU (Ref. Nos. 1 and 2) shall not exceed the limits specified below:

Pollutants	Emission Limits*	Averaging Times
Dioxins/Furans (total mass basis)	13 nanograms per dry standard cubic meter	3-run average (minimum run duration is 4 hours)
Cadmium	0.020 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)
Lead	0.20 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)
Mercury	0.080 milligrams per dry standard cubic meter or 85 percent reduction of potential mercury emissions	3-run average (run duration specified in test method)
Opacity	10 percent	Thirty 6-minute average
Particulate Matter	24 milligrams per dry standard cubic meter	3-run average (run duration specified in test method)
Hydrogen Chloride	25 parts per million by dry volume or 95 percent reduction of potential hydrogen chloride emissions	3-run average (run duration specified in test method)

Pollutants	Emission Limits*	Averaging Times
Nitrogen Oxides	250 parts per million by dry volume	3-run average (run duration specified in test method)
Sulfur Dioxide	30 parts per million by dry volume or 80 percent reduction of potential sulfur dioxide emissions	24-hour daily block geometric average concentration or percent reduction
Carbon Monoxide	100 parts per million by dry volume	4-hour
Fugitive Ash	Visible emissions for no more than 5 percent of hourly observation period	Three 1-hour observation periods

* All emission limits (except opacity) are measured at 7 percent oxygen

Compliance with the emission limits for dioxins/furans (total mass basis), cadmium, lead, mercury, opacity, particulate matter, nitrogen oxides, hydrogen chloride and fugitive ash shall be determined by stack tests as required by Condition 49. Compliance with the emission limits for sulfur dioxide and carbon monoxide shall be determined by continuous emission monitoring systems as required by Condition 38.
(9 VAC 5-80-1180, 9 VAC 5-50-260, 9 VAC 5-50-410 and 40 CFR §60.1215)

17. Startup/Shutdown/Malfunction – The emission limits contained in Condition 16 apply at all times except during periods of MWCU startup, shutdown, or malfunction.

- a. Each startup, shutdown, or malfunction must not last for longer than 3 hours. Startup period means the period when a MWCU begins the continuous combustion of municipal waste. It does not include any warm-up period during which the MWCU combusts fossil fuel but receives no municipal solid waste.
- b. A maximum of 3 hours of test data can be dismissed from compliance calculations during periods of startup, shutdown, or malfunction.
- c. During periods of startup, shutdown, or malfunction periods longer than 3 hours, emissions data cannot be discarded from compliance calculations and all provisions under 40 CFR §60.11(d) apply.

(9 VAC 5-50-410, 40 CFR §60.1220 and 40 CFR §60.1465)

18. Emission Limits - Emissions from the operation of each MWCU (Ref. Nos. 1 and 2) shall not exceed the limits specified below:

Particulate Matter	1.68	lbs/hr	7.00	tons/yr
PM-10	1.68	lbs/hr	7.00	tons/yr

Nitrogen Oxides (as NO ₂)	19.69	lbs/hr	81.92	tons/yr
Sulfur Dioxide	5.50	lbs/hr	22.90	tons/yr
Carbon Monoxide	8.03	lbs/hr	33.40	tons/yr
Volatile Organic Compounds	0.42	lbs/hr	1.75	tons/yr
Hydrogen Chloride	2.58	lbs/hr	10.74	tons/yr

Compliance with the emission limits for particulate matter, nitrogen oxides and hydrogen chloride shall be determined by stack tests as required by Condition 49. All particulate matter shall be considered as PM-10 and compliance with PM-10 emission limits shall be determined by stack test for particulate matter. Compliance with the emission limits for sulfur dioxide and carbon monoxide shall be determined by continuous emission monitoring systems as required by Condition 38. Annual emission limits for volatile organic compounds are derived from the estimated overall emission contribution from operating limits in Condition 14, including periods of startup, shutdown, and malfunction. Annual emissions shall be calculated monthly as the sum of each consecutive 12-month period. Exceedance of the operating limits may be considered credible evidence of the exceedance of emission limits for volatile organic compounds.

(9 VAC 5-80-1180, 9 VAC 5-50-260 and 9 VAC 5-50-410)

19. Operator Training – The following operator training requirements apply:

- a. Three types of employees must complete the EPA or State-approved operator training course:
 - i. Chief facility operators.
 - ii. Shift supervisors.
 - iii. Control room operators.
- b. The employees listed in item a. must complete the operator training course by the date before an employee assumes responsibilities that affect operation of the MWCU.

(9 VAC 5-50-410, 40 CFR §60.1155 and 40 CFR §60.1160)

20. Plant-Specific Training – The following plant specific training requirements apply:

- a. All employees with responsibilities that affect how a MWCU operates must complete the plant-specific training course. These include the following employees:
 - i. Chief facility operators.

- ii. Shift supervisors.
 - iii. Control room operators.
 - iv. Ash handlers.
 - v. Maintenance personnel.
 - vi. Crane or load handlers.
- b. The permittee shall do following four things for the plant-specific training:
- i. Develop a specific operating manual for the plant within six months after the MWCU initial startup.
 - ii. Establish a program to review the plant-specific operating manual with people whose responsibilities affect the operation of the MWCU. Complete the initial review by the date before an employee assumes responsibilities that affect operation of the MWCU.
 - iii. Update the manual annually.
 - iv. Review the manual with staff annually.

(9 VAC 5-50-410, 40 CFR §60.1155, 40 CFR §60.1165 and 40 CFR §60.1170)

21. **Plant Specific Training Manual** – The permittee shall include the following 11 items, at a minimum, in the operating manual as required in Condition 20.b.i.
- a. A summary of all applicable requirements in 40 CFR Part 60, Subpart AAAA.
 - b. A description of the basic combustion principles that apply to MWCUs.
 - c. Procedures for receiving, handling, and feeding municipal solid waste.
 - d. Procedures to be followed during periods of startup, shutdown, and malfunction of the MWCU.
 - e. Procedures for maintaining a proper level of combustion air supply.
 - f. Procedures for operating the MWCU with the requirements contained in 40 CFR Part 60, Subpart AAAA.
 - g. Procedures for responding to periodic upset or off-specification conditions.
 - h. Procedures for minimizing carryover of particulate matter.
 - i. Procedures for handling ash.

- j. Procedures for monitoring emissions from the MWCU.
- k. Procedures for recordkeeping and reporting.

The permittee shall keep the operating manual in an easily accessible location at the plant. It must be available for review or inspection by all employees who must review it and by the DEQ.

(9 VAC 5-50-410, 40 CFR §60.1175 and 40 CFR §60.1180)

22. Operator Certification – The following operator certification requirements apply for the MWCUs (Ref. Nos. 1 and 2):

- a. Each chief facility operator and shift supervisor must obtain and keep a current provisional operator certification from the American Society of Mechanical Engineers (QRO-1-1994 (incorporated by reference in 40 CFR §60.17(h)(1))) or a current provisional operator certification from an applicable state certification program.
- b. Each chief facility operator and shift supervisor must obtain a provisional certification by six months after they transfer to the MWCU or six months after they are hired to work at the MWCU.
- c. Each chief facility operator and shift supervisor must take one of three actions:
 - i. Obtain a full certification from the American Society of Mechanical Engineers or a State certification program in Virginia.
 - ii. Schedule a full certification exam with the American Society of Mechanical Engineers (QRO-1-1994 (incorporated by reference in 40 CFR §60.17(h)(1))).
 - iii. Schedule a full certification exam with a certification program in Virginia.
- d. The chief facility operator and shift supervisor must obtain the full certification or be scheduled to take the certification exam by six months after they transfer to the MWCU or six months after they are hired to work at the MWCU.
- e. After the required date for full or provisional certifications, the permittee shall not operate the MWCU unless one of four employees is on duty:
 - i. A fully certified chief facility operator.
 - ii. A provisionally certified chief facility operator who is scheduled to take the full certification exam.
 - iii. A fully certified shift supervisor.
 - iv. A provisionally certified shift supervisor who is scheduled to take the full certification exam.

- f. If the certified chief facility operator and certified shift supervisor are both unavailable, a provisionally certified control room operator at the MWCU may fulfill the certified operator requirement. Depending on the length of time that a certified chief facility operator and certified shift supervisor are away, the permittee must meet one of three criteria:
- i. When the certified chief facility operator and certified shift supervisor are both offsite for 12 hours or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by DEQ.
 - ii. When the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties without notice to, or approval by DEQ. However, the permittee must record the period when the certified chief facility operator and certified shift supervisor are offsite and include this information in the annual report as required under Condition 54.1.
 - iii. When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks, and no other certified operator is onsite, the provisionally certified control room operator may perform those duties. However, the permittee must take two actions:
 - 1) Notify DEQ in writing. In the notice, state what caused the absence and what you are doing to ensure that a certified chief facility operator or certified shift supervisor is on-site.
 - 2) Submit a status report and corrective action summary to DEQ every 4 weeks following the initial notification. If DEQ notifies you that your status report or corrective action summary is disapproved, the MWCU may continue operation for 90 days, but then must cease operation. If corrective actions are taken in the 90-day period such that DEQ withdraws the disapproval, MWCU operation may continue.

(9 VAC 5-50-410, 40 CFR §60.1185, 40 CFR §60.1190 and 40 CFR §60.1195)

23. Good Combustion Practices – The following operating practice requirements apply for the MWCUs (Ref. Nos. 1 and 2):

- a. The permittee shall not operate the MWCU at loads greater than 110 percent of the maximum demonstrated unit load of the MWCU (4-hour block average), as specified under “Definitions” in 40 CFR §60.1465.
- b. The permittee shall not operate the MWCU at loads that exceed the maximum demonstrated unit load of the MWCU (4-hour block average) during the most recent Hydrogen Chloride stack test that demonstrates compliance with the applicable emission limit for Hydrogen Chloride specified in Conditions 16 and 18.

- c. The permittee shall not operate the MWCU so that the temperature at the inlet of the particulate matter control device exceeds 17°C above the maximum demonstrated temperature of the particulate matter control device (4-hour block average), as specified under “Definitions” in 40 CFR §60.1465.
- d. The permittee shall maintain an 8-hour block average carbon feed rate at or above the highest average level established during the most recent dioxins/furans or mercury test.
- e. The permittee shall evaluate total carbon usage for each calendar quarter. The total amount of carbon purchased and delivered to the municipal waste combustion plant must be at or above the required quarterly usage of carbon. At the permittee’s option, the permittee may choose to evaluate required quarterly carbon usage on a MWCU basis for each individual MWCU at the plant. The permittee shall calculate the required quarterly usage of carbon using the appropriate equations given below:

- i. Quarterly carbon usage on plant basis:

$$C = \sum_{i=1}^n f_i \times h_i$$

Where:

C = required quarterly carbon usage for the plant in kilograms (or pounds).

f_i = required carbon feed rate for the MWCU in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxin/furans stack tests (whichever has a higher feed rate).

h_i = number of hours the MWCU was in operation during the calendar quarter (hours).

n = number of MWCUs, i, located at the plant.

- ii. Quarterly carbon usage on unit basis:

$$C = f * h$$

Where:

C = required quarterly carbon usage for the unit in kilograms (or pounds).

f = required carbon feed rate for the MWCU in kilograms (or pounds) per hour. This is the average carbon feed rate during the most recent mercury or dioxins/furans stack tests (whichever has a higher feed rate).

h = number of hours the MWCU was in operation during the calendar quarter (hours).

- f. The MWCU is exempt from limits on load level, temperature at the inlet of the particulate matter control device, and carbon feed rate during any of five situations:
 - i. During the annual tests for dioxins/furans.
 - ii. During the annual mercury tests (for carbon feed rate requirements only).
 - iii. During the 2 weeks preceding the annual tests for dioxins/ furans.
 - iv. During the 2 weeks preceding the annual mercury tests (for carbon feed rate requirements only).
 - v. Whenever DEQ permits to do any of following five activities:
 - 1) Evaluate system performance.
 - 2) Test new technology or control technologies.
 - 3) Perform diagnostic testing.
 - 4) Perform other activities to improve the performance of the MWCU.
 - 5) Perform other activities to advance the state of the art for emission controls for the MWCU.

(9 VAC 5-80-1180, 9 VAC 5-50-410, 40 CFR §60.1200 and 40 CFR §60.1460(f))

24. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the MWCUs described in Condition 1 (Ref. Nos. 1 and 2) shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart AAAA.
(9 VAC 5-50-400 and 9 VAC 5-50-410)

OPERATING/EMISSION LIMITATIONS – BOILERS (Ref. Nos. 3 and 4) and SHREDDER (Ref. No. 8)

25. **Fuel** - The approved fuel for the two boilers (Ref. Nos. 3 and 4) are natural gas and distillate oil. A change in the fuels may require a permit to modify and operate.
(9 VAC 5-80-1180)
26. **Fuel** - The approved fuel for the shredder (Ref. No. 8) is distillate oil. A change in the fuel may require a permit to modify and operate.
(9 VAC 5-80-1180)
27. **Fuel Throughput** – The two boilers (Ref. Nos. 3 and 4) combined shall consume no more than 715 million cubic feet of natural gas and 1,296,000 gallons of distillate oil per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most

recently completed calendar month to the individual monthly totals for the preceding 11 months.

(9 VAC 5-80-1180)

28. **Fuel Throughput** – The shredder (Ref. No. 8) shall consume no more than 35,040 gallons of distillate oil per year, calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.

(9 VAC 5-80-1180)

29. **Fuel Specifications** - The distillate oil shall meet the specifications below:

DISTILLATE OIL which meets ASTM D396 specifications for numbers 1 or 2 fuel oil:
Maximum sulfur content per shipment: 0.05%

(9 VAC 5-80-1180 and 9 VAC 5-50-410)

30. **Fuel Certification** - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following:

- a. The name of the fuel supplier;
- b. The date on which the distillate oil was received;
- c. The volume of distillate oil delivered in the shipment;
- d. A statement that the distillate oil complies with the American Society for testing and Materials specifications D396 for numbers 1 or 2 fuel oil, and
- e. The sulfur content of the distillate oil.

(9 VAC 5-80-1180 and 9 VAC 5-50-410)

31. **Emission Limits** - Emissions from the operation of each boiler (Ref. Nos. 3 and 4) shall not exceed the limits specified below:

Particulate Matter	0.62	lbs/hr
PM-10	0.32	lbs/hr
Nitrogen Oxides (as NO ₂)	6.17	lbs/hr
Sulfur Dioxide	2.19	lbs/hr
Carbon Monoxide	3.56	lbs/hr

Volatile Organic Compounds	0.23	lbs/hr
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(9 VAC 5-80-1180 and 9 VAC 5-50-260)

32. **Emission Limits** - Emissions from the operation of the two boilers (Ref. Nos. 3 and 4) shall not exceed the limits specified below:

Particulate Matter	3.37	tons/yr
PM-10	2.75	tons/yr
Nitrogen Oxides (as NO ₂)	40.31	tons/yr
Sulfur Dioxide	4.76	tons/yr
Carbon Monoxide	30.21	tons/yr
Volatile Organic Compounds	1.97	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with the annual emission limits may be determined as stated in Conditions 25, 27 and 29.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)

33. **Emission Limits** - Emissions from the operation of the shredder (Ref. No. 8) shall not exceed the limits specified below:

Particulate Matter	0.33	lbs/hr	0.73	tons/yr
PM-10	0.33	lbs/hr	0.73	tons/yr
Nitrogen Oxides (as NO ₂)	4.74	lbs/hr	10.39	tons/yr
Sulfur Dioxide	0.32	lbs/hr	0.68	tons/yr
Carbon Monoxide	1.02	lbs/hr	2.24	tons/yr
Volatile Organic Compounds	0.38	lbs/hr	0.82	tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with the annual emission limits may be determined as stated in Conditions 26, 28 and 29.

(9 VAC 5-80-1180 and 9 VAC 5-50-260)

34. **Visible Emission Limit** - Visible emissions from the two boiler (Ref. Nos. 3 and 4) stacks shall not exceed 10 percent opacity except during one six-minute period in any hour in which visible emissions shall not exceed 20 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown, or malfunction.
(9 VAC 5-50-80, 9 VAC 5-50-260 and 9 VAC 5-50-410)

35. **Visible Emission Limit** - Visible emissions from the shredder (Ref. No. 8) stack shall not exceed 10 percent opacity as determined by the EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-50-260)

36. **Operating and Training Procedures** - Boiler emissions shall be controlled by proper operation and maintenance. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall maintain records of the required training including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boiler. These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.
(9 VAC 5-50-20 and 9 VAC 5-80-1180)

37. **Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the two boilers (Ref. Nos. 3 and 4) as described in Condition 1 shall be operated in compliance with the requirements of 40 CFR Part 60, Subpart Dc.
(9 VAC 5-50-400 and 9 VAC 5-50-410)

CONTINUOUS EMISSION MONITORING SYSTEMS (CEMS)

38. **CEMS** – CEMS for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide shall be installed, calibrated, maintained, and operated at each MWCU. The permittee must use data from CEMS for sulfur dioxide and carbon monoxide to demonstrate compliance with the emission limits specified in Condition 16. Each CEMS shall be installed, evaluated, and operated according to the “Monitoring Requirements” in 40 CFR §60.13. The CEMS for oxygen (or carbon dioxide), sulfur dioxide, and carbon monoxide shall be installed at the outlet of the air pollution control device. If the permittee elects to demonstrate compliance by monitoring the percent reduction of sulfur dioxide, CEMS for sulfur dioxide and oxygen (or carbon dioxide) must also be installed at the inlet of the air pollution control device. The permittee must monitor the oxygen (or carbon dioxide) concentration at each location where sulfur dioxide and carbon monoxide are monitored. The permittee may elect to monitor

carbon dioxide instead of oxygen as diluent. If carbon dioxide is monitored, then an oxygen monitor is not required, and the permittee must follow the requirements in Condition 39. The permittee can apply to the EPA for approval to use an alternative monitoring method under 40 CFR §60.13.i., if the permittee prefers to use an alternative sulfur dioxide monitoring method, such as parametric monitoring, or cannot monitor emissions at the inlet of the air pollution control device to determine percent reduction.

(9 VAC 5-50-40, 9 VAC 5-50-410 and 40 CFR §60.1230)

39. **CEMS** – If the permittee elects to monitor carbon dioxide instead of oxygen as a diluent gas, the permittee shall establish the relationship between oxygen and carbon dioxide during the initial evaluation of the CEMS. The permittee may establish the relationship during annual evaluations. The relationship is established using three procedures as described below:

- a. Use EPA Reference Method 3A or 3B of 40 CFR Part 60, Appendix A to determine oxygen concentration at the location of your carbon dioxide monitor.
- b. Conduct at least three test runs for oxygen. Make sure each test run represents a 1-hour average and that sampling continues for at least 30 minutes in each hour.
- c. Use the fuel-factor equation in EPA Reference Method 3B of 40 CFR Part 60, Appendix A to determine the relationship between oxygen and carbon dioxide.

(9 VAC 5-50-40, 9 VAC 5-50-410 and 40 CFR §60.1255)

40. **CEMS Performance Evaluations** - The following requirements apply for the performance evaluations of continuous emission monitoring systems:

- a. Conduct daily, quarterly, and annual evaluations of the continuous emission monitoring systems that measure oxygen (or carbon dioxide), sulfur dioxide and carbon monoxide.
- b. For annual evaluations, collect data concurrently (or within 30 to 60 minutes) using the oxygen (or carbon dioxide) continuous emission monitoring system, the sulfur dioxide, and carbon monoxide continuous emission monitoring systems, as appropriate, and the appropriate test methods specified in 40 CFR Part 60, Subpart AAAA, Table 3. Collect these data during each annual evaluation of the continuous emission monitoring systems following the applicable performance specifications in Appendix B of 40 CFR Part 60. 40 CFR Part 60, Table 4 of Subpart AAAA shows the performance specifications that apply to each continuous emission monitoring system.
- c. Follow the quality assurance procedures in Procedure 1 of Appendix F of 40 CFR Part 60 for each continuous emission monitoring system. These procedures include daily calibration drift and quarterly accuracy determinations.

(9 VAC 5-50-40, 9 VAC 5-50-410 and 40 CFR §60.1240)

41. CEMS for Oxygen – The oxygen CEMS is exempt from following two requirements:

- a. Section 2.3. of performance specification 3 in Appendix B of 40 CFR Part 60 (relative accuracy requirement).
- b. Section 5.1.1. of Appendix F of 40 CFR Part 60 (relative accuracy test audit).

(9 VAC 5-50-40, 9 VAC 5-50-410 and 40 CFR §60.1245)

42. Schedule for CEMS Evaluation – The following schedule applies for evaluating CEMS:

- a. Conduct annual evaluations of the continuous emission monitoring systems no more than 13 months after the previous evaluation was conducted.
- b. Evaluate the continuous emission monitoring systems daily and quarterly as specified in Appendix F of 40 CFR Part 60.

(9 VAC 5-50-40 and 40 CFR §60.1250)

43. CEMS Data – The following conditions apply regarding collection of monitoring data and enforceability of the data collection requirements with CEMS:

- a. Obtain 1-hour arithmetic averages. Make sure the averages for sulfur dioxide and carbon monoxide are in parts per million by dry volume at 7 percent oxygen (or the equivalent carbon dioxide level). Use the 1-hour averages of oxygen (or carbon dioxide) data from the continuous emission monitoring system to determine the actual oxygen (or carbon dioxide) level and to calculate emissions at 7 percent oxygen (or the equivalent carbon dioxide level).
- b. Obtain at least two data points per hour in order to calculate a valid 1-hour arithmetic average. 40 CFR §60.13(e)(2) requires the continuous emission monitoring systems to complete at least one cycle of operation (sampling, analyzing, and data recording) for each 15-minute period.
- c. Obtain valid 1-hour averages for 75 percent of the operating hours per day and for 90 percent of the operating days per calendar quarter. An operating day is any day the unit combusts any municipal solid waste.
- d. If the minimum data required in item a. through c. above are not obtained, the permittee is in violation of this data collection requirement regardless of the emission level monitored, and must notify DEQ according to Condition 54.e.
- e. If the minimum data required in items a. through c. above are not obtained, the permittee must still use all valid data from the continuous emission monitoring systems in calculating emission concentrations and percent reductions in accordance with Condition 44.

- f. If any of continuous emission monitoring systems are temporarily unavailable to meet the data collection requirement, refer to Table 4 of 40 CFR Part 60, Subpart AAAA. This table shows alternate methods for collecting data when systems malfunction or when repairs, calibration checks, or zero and span checks keep you from collecting the minimum amount of data.

(9 VAC 5-50-40, 9 VAC 5-50-410, 40 CFR §60.1260 and 40 CFR §60.1280)

44. CEMS Data – The following procedures shall be used to convert 1-hour arithmetic averages into the appropriate averaging times and units:

- a. Use the equation in Condition 48.d. to calculate emissions at 7 percent oxygen.
- b. Use EPA Reference Method 19, section 4.3 (40 CFR Part 60, Appendix A), to calculate the daily geometric average concentrations of sulfur dioxide emissions. If percent reduction of sulfur dioxide is monitored, use EPA Reference Method 19, section 5.4 (40 CFR Part 60, Appendix A), to determine the daily geometric average percent reduction of potential sulfur dioxide emissions.
- c. Use EPA Reference Method 19, section 4.1 (40 CFR Part 60, Appendix A) to calculate the 4-hour averages for concentrations of carbon monoxide.

(9 VAC 5-50-40, 9 VAC 5-50-410 and 40 CFR §60.1265)

CONTINUOUS OPACITY MONITORING SYSTEMS (COMS)

- 45. COMS** – Continuous Opacity Monitoring System shall be installed, calibrated, maintained, and operated to measure and record the opacity of emissions from each MWCU (Ref. Nos. 1 and 2) stack. Each COMS shall be installed, evaluated, and operated according to the “Monitoring Requirements” in 40 CFR §60.13. Use the required span values and applicable performance specifications in Table 4 of 40 CFR Part 60, Subpart AAAA, for the operation of COMS.

(9 VAC 5-50-40, 9 VAC 5-50-410, 40 CFR §60.1270 and 40 CFR §60.1275)

- 46. COMS Performance Evaluations** – Annual performance evaluations of the COMS shall be conducted in accordance with Performance Specification 1 in Appendix B of 40 CFR Part 60. The evaluation shall be conducted no more than 13 months after the previous evaluation. Annual evaluations of the COMS shall be submitted as part of the annual report as required in Condition 54.

(9 VAC 5-50-40, 9 VAC 5-50-410 and 40 CFR §60.1270)

CONTINUING COMPLIANCE DETERMINATION

- 47. Testing/Monitoring Ports** – The permitted facility shall be constructed so as to allow for emissions testing upon reasonable notice at any time, using appropriate methods. This includes constructing the facility such that volumetric flow rates and pollutant emission rates can be accurately determined by applicable test methods and providing stack or duct that is

free from cyclonic flow. Test ports shall be provided when requested in accordance with the applicable performance specification (reference 40 CFR Part 60, Appendix B).
(9 VAC 5-50-30 F)

48. **Stack Testing Procedure** – The permittee shall follow the procedures below for the annual stack testing required under Condition 49.

- a. The permittee shall follow the table below (Requirements for Stack Tests) to establish the sampling location and to determine pollutant concentrations, number of traverse points, individual test methods, and other specific testing requirements for the different pollutants.

Requirements for Stack Tests

Pollutants	Test methods to determine the sampling location 40 CFR Part 60, Appendix A	Test methods to measure pollutant concentration 40 CFR Part 60, Appendix A	Additional information
Dioxins/Furans	Method 1	Method 23	The minimum sampling time must be 4 hours per test run while the MWCU is operating at full load
Cadmium	Method 1	Method 29	Compliance testing must be performed while the MWCU is operating at full load
Lead	Method 1	Method 29	Compliance testing must be performed while the MWCU is operating at full load
Mercury	Method 1	Method 29	Compliance testing must be performed while the MWCU is operating at full load
Opacity	Method 9	Method 9	Use Method 9 to determine compliance with opacity limit. 3-hour observation period (thirty 6-minute averages)
Particulate Matter	Method 1	Method 5	The minimum sample matter volume must be 1.0 cubic meters. The probe and filter holder heating systems in the sample train must be set to provide a gas temperature no greater than 160±14°C. The minimum sampling time is 1 hour.

Pollutants	Test methods to determine the sampling location 40 CFR Part 60, Appendix A	Test methods to measure pollutant concentration 40 CFR Part 60, Appendix A	Additional information
Nitrogen Oxides	Method 1	Method 19	Compliance testing must be performed while the MWCU is operating at full load
Hydrogen Chloride	Method 1	Method 26 or 26A	Compliance testing must be performed while the MWCU is operating at full load
Fugitive Ash	Not Applicable	Method 22 (visible emissions)	The three 1-hour observation period must include periods when the facility transfers fugitive ash from the MWCU to the area where the fugitive ash is stored or loaded into containers or trucks.

- b. Stack tests for all listed pollutants consist of at least three test runs, as specified in 40 CFR §60.8 (Performance Tests). Use the average of the pollutant emission concentrations from the three test runs to determine compliance with the emission limits in Conditions 16 and 18.
- c. Obtain an oxygen (or carbon dioxide) measurement at the same time as your pollutant measurements to determine diluent gas levels, as specified in Condition 38.
- d. Use the following equations to calculate emission levels at 7 percent oxygen (or an equivalent carbon dioxide basis), the percent reduction in potential hydrogen chloride emissions, and the reduction efficiency for mercury emissions. See the individual test methods in Table 5 of 40 CFR Part 60, Subpart AAAAA, for other required equations.
 - i. Correct any pollutant concentration to 7 percent oxygen using the following equation:

$$C_{7\%} = C_{\text{unc}} * (13.9) * (1 / (20.9 - C_{O_2}))$$

Where:

$C_{7\%}$ = concentration corrected to 7 percent oxygen.

C_{unc} = uncorrected pollutant concentration.

C_{O_2} = concentration of oxygen (%).

- ii. Calculate the percent reduction in potential mercury emissions (% P_{Hg}) using the following equation:

$$\%P_{Hg} = (E_i - E_o) * (100/E_i)$$

Where:

$\%P_{Hg}$ = percent reduction of potential mercury emissions
 E_i = mercury emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis
 E_o = mercury emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

- iii. Calculate the percent reduction in potential hydrogen chloride emissions ($\%P_{HCl}$) using the following equation:

$$\%P_{HCl} = (E_i - E_o) * (100/E_i)$$

Where:

$\%P_{HCl}$ = percent reduction of the potential hydrogen chloride emissions
 E_i = hydrogen chloride emission concentration as measured at the air pollution control device inlet, corrected to 7 percent oxygen, dry basis
 E_o = hydrogen chloride emission concentration as measured at the air pollution control device outlet, corrected to 7 percent oxygen, dry basis

- e. The permittee can apply to DEQ for approval under 40 CFR §60.8(b) to use a reference method with minor changes in methodology, use an equivalent method, use an alternative method the results of which DEQ has determined are adequate for demonstrating compliance, waive the requirement for a performance test because the permittee has demonstrated by other means that the MWCUs are in compliance, or use a shorter sampling time or smaller sampling volume.

(9 VAC 5-50-410, 40 CFR §60.1300 and 40 CFR §60.1460)

CONTINUING COMPLIANCE DETERMINATION

49. **Annual Stack Test** – Annual stack tests shall be conducted on each MWCU stack (Ref. Nos. 1 and 2) for dioxins/furans, cadmium, lead, mercury, opacity, particulate matter, nitrogen oxides, hydrogen chloride, and fugitive ash. Each annual stack test shall be conducted no later than 13 months after the previous stack test. Tests shall be conducted and reported and data reduced as set forth in 9 VAC 5-50-30 and the test methods and procedures contained in Condition 48. The details of the tests are to be arranged with the Director, Valley Region. The permittee shall submit a test protocol at least 30 days prior to testing. Test results shall be submitted to the Director, Valley Region, as part of the annual report required in Condition 54 and shall conform to the test report format enclosed with this permit.

(9 VAC 5-50-30, 9 VAC 5-80-1200, 9 VAC 5-50-410 and 40 CFR §60.1285)

50. Reduced Stack Testing – The permittee may test less often than as required in Condition 49 under the following circumstances:

- a. The permittee may test less often if all stack tests for a given pollutant over 3 consecutive years show compliance with the emission limit. In this case, the permittee is not required to conduct a stack test for that pollutant for the next 2 years. However, the permittee must conduct another stack test within 36 months of the anniversary date of the third consecutive stack test that shows compliance with the emission limit. Thereafter, the permittee must perform stack tests every third year but no later than 36 months following the previous stack tests. If a stack test shows noncompliance with an emission limit, the permittee must conduct annual stack tests for that pollutant until all stack tests over 3 consecutive years show compliance with the emission limit for that pollutant. The provision applies to all pollutants subject to stack testing requirements: dioxins/furans, cadmium, lead, mercury, particulate matter, nitrogen oxides, opacity, hydrogen chloride, and fugitive ash.
- b. The permittee may test less often for dioxins/furans emissions if each MWCU (Ref. Nos. 1 and 2) have demonstrated levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass) for 2 consecutive years. In this case, the permittee may choose to conduct annual stack tests on only one MWCU per year. This provision only applies to stack testing for dioxins/furans emissions.
 - i. Conduct the stack test no more than 13 months following a stack test on any MWCU. Each year, test a different MWCU in a sequence that you determine. Once a testing sequence is determined, it must not be changed without approval by the Director, Valley Region.
 - ii. If each annual stack test shows levels of dioxins/furans emissions less than or equal to 7 nanograms per dry standard cubic meter (total mass), the permittee may continue stack tests on only one MWCU.
 - iii. If any annual stack test indicates levels of dioxins/furans emissions greater than 7 nanograms per dry standard cubic meter (total mass), the permittee shall conduct subsequent annual stack tests on all MWCUs. The permittee may return to testing one MWCU if it can demonstrate dioxins/furans emission levels less than or equal to 7 nanograms per dry standard cubic meter (total mass) for all MWCUs for 2 consecutive years.

(9 VAC 5-50-410 and 40 CFR §60.1305)

51. Stack Testing Schedule – The permittee may not deviate from the 13-month testing schedules specified in Conditions 49 and 50 unless the permittee applies to EPA for an alternative schedule, and the EPA approves the request for alternate scheduling prior to the date on which the permittee would otherwise have been required to conduct the next stack test.

(9 VAC 5-50-410 and 40 CFR §60.1310)

52. Visible Emissions Evaluation – The permittee shall conduct visible emission inspections on each of the boiler (Ref. Nos. 3 and 4) stacks in accordance with the following procedures and frequencies:

- a. At a minimum of once per month, the permittee shall determine the presence of visible emissions. If during the inspection, visible emissions are observed, a visible emission evaluation (VEE) shall be conducted in accordance with the 40 CFR Part 60, Appendix A, Method 9. The VEE shall be conducted for a minimum of six minutes. If any of the observations exceed 10 percent opacity, the VEE shall be conducted for a total of 60 minutes.
- b. All visible emissions inspections shall be performed when the boiler is operating.
- c. If visible emissions inspections conducted during 12 consecutive months show no visible emissions for a particular boiler stack, the permittee may reduce the monitoring frequency to once per quarter for that boiler stack. Anytime the quarterly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per month for that stack.
- d. All visible emission inspections, observations and VEE results shall be recorded.

(9 VAC 5-50-20)

53. Visible Emissions Evaluation – The permittee shall conduct visible emission inspections on the shredder stack (Ref. No. 8) in accordance with the following procedures and frequencies:

- a. At a minimum of once per month, the permittee shall determine the presence of visible emissions. If during the inspection, visible emissions are observed, a visible emission evaluation (VEE) shall be conducted in accordance with the 40 CFR Part 60, Appendix A, Method 9. The VEE shall be conducted for a minimum of six minutes.
- b. All visible emissions inspections shall be performed when the shredder is operating.
- c. If visible emissions inspections conducted during 12 consecutive months show no visible emissions for the shredder stack, the permittee may reduce the monitoring frequency to once per quarter. Anytime the quarterly visible emissions inspections show visible emissions, or when requested by DEQ, the monitoring frequency shall be increased to once per month for that stack.
- d. All visible emission inspections, observations and VEE results shall be recorded.

(9 VAC 5-50-20)

REPORTING

54. **Annual Report** - The permittee shall submit an annual report no later than March 1 of each year that follows the calendar year in which the data are collected. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:
- a. The results of the annual stack test for each MWCU, using appropriate units, for nine pollutants as recorded under Condition 49:
 - i. Dioxins/furans.
 - ii. Cadmium.
 - iii. Lead.
 - iv. Mercury.
 - v. Particulate matter.
 - vi. Nitrogen oxides.
 - vii. Opacity.
 - viii. Hydrogen chloride.
 - ix. Fugitive ash.
 - b. A list of the highest average levels recorded for each MWCU, in the appropriate units. List these values for four pollutants or parameters.
 - i. Sulfur dioxide emissions.
 - ii. Carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of the flue gases at the inlet of the particulate matter air pollution control device (4-hour block average).
 - c. The highest 6-minute opacity level measured for each MWCU. This value should be based on all 6-minute average opacity levels recorded by the continuous opacity monitoring system (Condition 58.i.i.1).

- d. Records for activated carbon for each MWCU including:
 - i. The average carbon feed rates recorded during the most recent dioxins/furans and mercury stack tests.
 - ii. The lowest 8-hour block average carbon feed rate recorded during the year.
 - iii. The total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If total carbon purchased and delivered on a MWCU basis was chosen to evaluate, record the total carbon purchased and delivered for each individual MWCU at the plant.
 - iv. The required quarterly carbon usage of the municipal waste combustion plant, calculated using the appropriate equation in Condition 23.d. If quarterly usage for carbon is evaluated on a MWCU basis, record the required quarterly usage for each MWCU at the plant.
- e. The total number of days that the permittee did not obtain the minimum number of hours of data for five pollutants or parameters. Include the reasons for not obtaining the data and corrective actions taken to obtain the data in the future. Include data on:
 - i. Sulfur dioxide emissions.
 - ii. Carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of flue gases at the inlet of the particulate matter air pollution control device.
 - v. Carbon feed rate.
- f. The number of hours excluded from the calculation of average levels (include the reasons for excluding it). Include data for five pollutants or parameters
 - i. Sulfur dioxide emissions.
 - ii. Carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of the flue gases at the inlet of the particulate matter air pollution control device.
 - v. Carbon feed rate.

- g. A notice of the intent to begin a reduced stack testing schedule for dioxins/furans emissions during the following calendar year, if eligible for alternative scheduling (Condition 50.a. or b.).
- h. A notice of the intent to begin a reduced stack testing schedule for other pollutants during the following calendar year, if eligible for alternative scheduling (Condition 50.a.).
- i. A summary of any emission or parameter level that did not meet the limits specified in this permit.
- j. A summary of the data referenced in items a. through d. above from the year preceding the reporting year. This summary gives DEQ a summary of the performance of the MWCU over a 2-year period.
- k. If carbon dioxide was monitored instead of oxygen as a diluent gas, documentation of the relationship between oxygen and carbon dioxide, as specified in Condition 39.
- l. Documentation of periods when all certified chief facility operators and certified shift supervisors are offsite for more than 12 hours.
- m. Annual performance evaluations of the COMS.

(9 VAC 5-50-410, 40 CFR §60.19(d), 40 CFR §60.1385, 40 CFR §60.1405 and 40 CFR §60.1410)

55. Semiannual Report - The permittee shall submit a semiannual report on any recorded emission or parameter level that does not meet the requirements for each MWCU (Ref. Nos. 1 and 2) specified in this permit. For data collected during the first half of a calendar year, the semiannual report shall be submitted by September 1 of that year. For data collected during the second half of the calendar year, the semiannual report shall be submitted by March 1 of the following year. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

- a. For any of the following five pollutants or parameters that exceeded the limits specified in this permit, include the calendar date they exceeded the limits, the averaged and recorded data for that date, the reasons for exceeding the limits, and your corrective actions taken.
 - i. Concentration or percent reduction of sulfur dioxide emissions.
 - ii. Concentration of carbon monoxide emissions.
 - iii. Load level of the MWCU.
 - iv. Temperature of the flue gases at the inlet of the particulate matter air pollution control device.

- v. Average 6-minute opacity level.
- b. If the results of the annual stack tests (as recorded in Condition 49) show emissions above the limits specified in Condition 16 for dioxins/furans, cadmium, lead, mercury, particulate matter, nitrogen oxides, opacity hydrogen chloride, and fugitive ash, include a copy of the test report that documents the emission levels and corrective actions taken.
- c. Records regarding carbon usage including:
 - i. Documentation of all dates when the 8-hour block average carbon feed rate (calculated from the carbon injection system operating parameter) is less than the highest carbon feed rate established during the most recent mercury and dioxins/furans stack test (as specified in Condition 58.j.i.1). Include four items:
 - 1) Eight-hour average carbon feed rate.
 - 2) Reasons for occurrences of low carbon feed rates.
 - 3) The corrective actions taken to meet the carbon feed rate requirement.
 - 4) The calendar date.
 - ii. Documentation of each quarter when total carbon purchased and delivered to the municipal waste combustion plant is less than the total required quarterly usage of carbon. If you choose to evaluate total carbon purchased and delivered on a MWCU basis, record the total carbon purchased and delivered for each individual MWCU at your plant. Include five items:
 - 1) Amount of carbon purchased and delivered to the plant.
 - 2) Required quarterly usage of carbon.
 - 3) Reasons for not meeting the required quarterly usage of carbon.
 - 4) The corrective actions taken to meet the required quarterly usage of carbon.
 - 5) The calendar date.

(9 VAC 5-50-410, 40 CFR §60.19(d), 40 CFR §60.1385 and 40 CFR §60.1425)

56. Reporting Dates for Annual or Semiannual Report – The reporting dates for annual and semiannual reports as specified in Conditions 54 and 55 may be changed upon DEQ's approval. The permittee shall follow procedures in 40 CFR Part 60, Section 60.19 (c) to seek approval to change reporting dates.

(9 VAC 5-50-410, 40 CFR §60.1385, 40 CFR §60.1420 and 40 CFR §60.1425)

57. Semiannual Fuel Quality Reports – The permittee shall submit fuel quality reports to the Director, Valley Region, within 30 days after the end of each semi-annual period. If no shipments of distillate oil were received during the semi-annual period, the semi-annual report shall consist of the dates included in the semi-annual period and a statement that no oil was received during the semi-annual period. If distillate oil was received during the semi-annual period, the reports shall include:

- a. Dates included in the semi-annual period,
- b. A copy of all fuel supplier certifications for all shipments of distillate oil received during the semi-annual period or a semi-annual summary from each fuel supplier that includes the information specified in Condition 30 for each shipment of distillate oil, and
- c. A signed statement from the owner or operator of the facility that the fuel supplier certifications or summaries of fuel supplier certifications represent all of the distillate oil burned or received at the facility.

One copy of the semi-annual report shall be submitted to the U.S. Environmental Protection Agency at the following address:

Associate Director
Office of Air Enforcement (3AP10)
U.S. Environmental Protection Agency
Region III
1650 Arch Street
Philadelphia, PA 19103-2029

(9 VAC 5-80-1180, 9 VAC 5-50-50 and 40 CFR §60.19(d))

RECORDS

58. On Site Records - The permittee shall maintain records of emission data and operating parameters as necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Valley Region. These records shall include, but are not limited to:

- a. Annual throughput of solid waste to each MWCU (Ref. Nos. 1 and 2), calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
- b. Monthly and annual throughput of natural gas (in million cubic feet) and distillate oil (in 1000 gallons) for each boiler (Ref. Nos. 3 and 4). Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the

most recently completed calendar month to the individual monthly totals for the preceding 11 months.

- c. Annual throughput of distillate oil (in 1000 gallons) for the shredder (Ref. No. 8).
Annual throughput shall be calculated monthly as the sum of each consecutive 12-month period. Compliance for the consecutive 12-month period shall be demonstrated monthly by adding the total for the most recently completed calendar month to the individual monthly totals for the preceding 11 months.
- d. The DEQ-approved, annual pollutant specific emission factors and the equations used to demonstrate compliance with Conditions 18, 32 and 33.
- e. Continuous monitoring system emissions data, calibrations and calibration checks, percent operating time, and excess emissions.
- f. Materials separation plan and siting analysis to include the following:
 - i. The date of each record.
 - ii. The final materials separation plan.
 - iii. The siting analysis.
 - iv. A record of the location and date of the public meetings.
 - v. Responses to the public comments received during the public comment periods.
- g. Operator training and certification for the MWCU to include the following:
 - i. Records of provisional certifications. Include three items:
 - 1) Names of the chief facility operator, shift supervisors, and control room operators who are provisionally certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.
 - 2) Dates of the initial provisional certifications.
 - 3) Documentation showing current provisional certifications.
 - ii. Records of full certifications. Include three items:
 - 1) Names of the chief facility operator, shift supervisors, and control room operators who are fully certified by the American Society of Mechanical Engineers or an equivalent State-approved certification program.
 - 2) Dates of initial and renewal full certifications.

- 3) Documentation showing current full certifications.
- iii. Records showing completion of the operator training course. Include three items:
 - 1) Names of the chief facility operator, shift supervisors, and control room operators who have completed the EPA or State municipal waste combustion operator training course.
 - 2) Dates of completion of the operator training course.
 - 3) Documentation showing completion of the operator training course.
 - iv. Records of reviews for plant-specific operating manuals. Include three items:
 - 1) Names of persons who have reviewed the operating manual.
 - 2) Date of the initial review.
 - 3) Dates of subsequent annual reviews.
 - v. Records of when a certified operator is temporarily offsite. Include two main items:
 - 1) If the certified chief facility operator and certified shift supervisor are offsite for more than 12 hours, but for 2 weeks or less, and no other certified operator is onsite, record the dates that the certified chief facility operator and certified shift supervisor were offsite.
 - 2) When the certified chief facility operator and certified shift supervisor are offsite for more than 2 weeks and no other certified operator is onsite, keep records of four items:
 - (a) Notice that all certified persons are offsite.
 - (b) The conditions that cause these people to be offsite.
 - (c) The corrective actions being taken to ensure a certified chief facility operator or certified shift supervisor is onsite.
 - (d) Copies of the written reports submitted every 4 weeks that summarize the actions taken to ensure that a certified chief facility operator or certified shift supervisor will be onsite.
 - vi. Records of calendar dates. Include the calendar date on each record.
 - h. Records of stack tests required under Condition 49:

- i. The results of the stack tests for nine pollutants or parameters recorded in the appropriate units of measure specified in Condition 16:
 - 1) Dioxins/furans.
 - 2) Cadmium.
 - 3) Lead.
 - 4) Mercury.
 - 5) Opacity.
 - 6) Particulate matter.
 - 7) Nitrogen oxides.
 - 8) Hydrogen chloride.
 - 9) Fugitive ash.
 - ii. Test reports including supporting calculations that document the results of all stack tests.
 - iii. The maximum demonstrated load of the MWCUs and maximum temperature at the inlet of the particulate matter control device during all stack tests for dioxins/furans emissions.
 - iv. The calendar date of each record.
- i. Records of continuously monitored pollutants and parameters to include following eight items:
 - i. Records of monitoring data. Document five parameters measured using continuous monitoring systems:
 - 1) All 6-minute average levels of opacity.
 - 2) All 1-hour average concentrations of sulfur dioxide emissions.
 - 3) All 1-hour average concentrations of carbon monoxide emissions.
 - 4) All 1-hour average load levels of the MWCU.
 - 5) All 1-hour average flue gas temperatures at the inlet of the particulate matter control device.

- ii. Records of average concentrations and percent reductions. Document four parameters:
 - 1) All 24-hour daily block geometric average concentrations of sulfur dioxide emissions or average percent reductions of sulfur dioxide emissions.
 - 2) All 4-hour block arithmetic average concentrations of carbon monoxide emissions.
 - 3) All 4-hour block arithmetic average load levels of the MWCU.
 - 4) All 4-hour block arithmetic average flue gas temperatures at the inlet of the particulate matter control device.
- iii. Records of exceedances. Document three items:
 - 1) Calendar dates whenever any of the four pollutant or parameter levels recorded in item ii., or the opacity level recorded in item i. 1) above did not meet the emission limits or operating levels specified in this permit.
 - 2) Reasons the applicable emission limits or operating levels are exceeded.
 - 3) Corrective actions taken, or going to be taken, to meet the emission limits or operating levels.
- iv. Records of minimum data. Document three items:
 - 1) Calendar dates for which the minimum amount of data required under Conditions 12 and 43 were not collected. Record these dates for four types of pollutants and parameters:
 - (a) Sulfur dioxide emissions.
 - (b) Carbon monoxide emissions.
 - (c) Load levels of the MWCU.
 - (d) Temperatures of the flue gases at the inlet of the particulate matter control device.
 - 2) Reasons the minimum data were not collected.
 - 3) Corrective actions taken, or going to take, to obtain the required amount of data.
- v. Records of exclusions. Document each time the data were excluded from the calculation of averages for any of the following four pollutants or parameters and the reasons the data were excluded:

- 1) Sulfur dioxide emissions.
 - 2) Carbon monoxide emissions.
 - 3) Load levels of the MWCU.
 - 4) Temperatures of the flue gases at the inlet of the particulate matter control device.
- vi. Records of drift and accuracy. Document the results of the daily drift tests and quarterly accuracy determinations according to procedure 1 of Appendix F of 40 CFR Part 60. Keep these records for the sulfur dioxide and carbon monoxide continuous emissions monitoring systems.
- vii. Records of the relationship between oxygen and carbon dioxide. Document the relationship between oxygen and carbon dioxide, as specified in Condition 39, if carbon dioxide was monitored instead of oxygen as a diluent gas.
- viii. Records of calendar dates. Include the calendar date on each record.
- j. Carbon feed rate. Keep records of five items:
- i. Records of average carbon feed rate. Document five items:
 - 1) Average carbon feed rate (in kilograms or pounds per hour) during all stack tests for dioxins/furans and mercury emissions. Include supporting calculations in the records.
 - 2) For the operating parameter chosen to monitor carbon feed rate, average operating level during all stack tests for dioxins/furans and mercury emissions. Include supporting data that document the relationship between the operating parameter and the carbon feed rate.
 - 3) All 8-hour block average carbon feed rates in kilograms (pounds) per hour calculated from the monitored operating parameter.
 - 4) Total carbon purchased and delivered to the municipal waste combustion plant for each calendar quarter. If total carbon purchased and delivered on a MWCU basis was chosen to evaluate, record the total carbon purchased and delivered for each individual MWCU at the plant. Include supporting documentation.
 - 5) Required quarterly usage of carbon for the municipal waste combustion plant, calculated using the appropriate equation in Condition 23.d. If quarterly usage for carbon on a MWCU basis was chosen to evaluate, record the required quarterly usage for each MWCU at the plant. Include supporting calculations.
 - ii. Records of low carbon feed rates. Document three items:

- 1) The calendar dates when the average carbon feed rate over an 8-hour block was less than the average carbon feed rates determined during the most recent stack test for dioxins/furans or mercury emissions (whichever has a higher feed rate).
 - 2) Reasons for the low carbon feed rates.
 - 3) Corrective actions taken or are taking to meet the 8-hour average carbon feed rate requirement.
- iii. Records of minimum carbon feed rate data. Document three items:
- 1) Calendar dates for which the minimum amount of carbon feed rate data were not collected as required under Condition 12 .
 - 2) Reasons the minimum data were not collected.
 - 3) Corrective actions taken or are taking to get the required amount of data.
- iv. Records of exclusions. Document each time data were excluded from the calculation of average carbon feed rates and the reasons the data were excluded.
- v. Records of calendar dates. Include the calendar date on each record.
- k. Initial, annual and semiannual reports.
- l. All fuel supplier certifications.
- m. Records of all visible emissions evaluations.
- n. Records of operating load of each MWCU (Ref. Nos. 1 and 2) to demonstrate compliance with the requirements in Condition 23.b.

These records shall be kept onsite in paper copy or electronic format unless DEQ approves another format. These records shall be available for submittal to the DEQ, or for onsite review by DEQ. All records shall be kept for at least five years.

(9 VAC 5-50-50, 40 CFR §60.1345, 40 CFR §60.1350, 40 CFR §60.1365 and 40 CFR §60.1370)

GENERAL CONDITIONS

59. Right of Entry - The permittee shall allow authorized local, state, and federal representatives, upon the presentation of credentials:

- a. To enter upon the permittee's premises on which the facility is located or in which any records are required to be kept under the terms and conditions of this permit;

- b. To have access to and copy at reasonable times any records required to be kept under the terms and conditions of this permit or the State Air Pollution Control Board Regulations;
- c. To inspect at reasonable times any facility, equipment, or process subject to the terms and conditions of this permit or the State Air Pollution Control Board Regulations; and
- d. To sample or test at reasonable times.

For purposes of this condition, the time for inspection shall be deemed reasonable during regular business hours or whenever the facility is in operation. Nothing contained herein shall make an inspection time unreasonable during an emergency.

(9 VAC 5-170-130 and 9 VAC 5-80-1180)

- 60. Notification for Facility or Control Equipment Malfunction** - The permittee shall furnish notification to the Director, Valley Region, of malfunctions of the affected facility or related air pollution control equipment that may cause excess emissions for more than one hour, by facsimile transmission, telephone or telegraph. Such notification shall be made as soon as practicable but not later than four daytime business hours after the malfunction is discovered. The permittee shall provide a written statement giving all pertinent facts, including the estimated duration of the breakdown, within 14 days of discovery of the malfunction. When the condition causing the failure or malfunction has been corrected and the equipment is again in operation, the permittee shall notify the Director, Valley Region.
- (9 VAC 5-20-180 C and 9 VAC 5-80-1180)

- 61. Violation of Ambient Air Quality Standard** - The permittee shall, upon request of the DEQ, reduce the level of operation or shut down a facility, as necessary to avoid violating any primary ambient air quality standard and shall not return to normal operation until such time as the ambient air quality standard will not be violated.
- (9 VAC 5-20-180 I and 9 VAC 5-80-1180)

- 62. Maintenance/Operating Procedures** - At all times, including periods of start-up, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate the affected source, including associated air pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions.

The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- a. Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- b. Maintain an inventory of spare parts.
- c. Have available written operating procedures for equipment. These procedures shall be based on the manufacturer's recommendations, at a minimum.

- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Records of maintenance and training shall be maintained on site for a period of five years and shall be made available to DEQ personnel upon request.

(9 VAC 5-50-20 E and 9 VAC 5-80-1180 D)

63. Permit Suspension/Revocation - This permit may be suspended or revoked if the permittee:

- a. Knowingly makes material misstatements in the application for this permit or any amendments to it;
- b. Fails to comply with the conditions of this permit;
- c. Fails to comply with any emission standards applicable to a permitted emissions unit;
- d. Causes emissions from this facility which result in violations of, or interferes with the attainment and maintenance of, any ambient air quality standard; or
- e. Fails to operate this facility in conformance with any applicable control strategy, including any emission standards or emission limitations, in the State Implementation Plan in effect on the date that the application for this permit is submitted;

(9 VAC 5-80-1210)

64. Change of Ownership - In the case of a transfer of ownership of a stationary source, the new owner shall abide by any current permit issued to the previous owner. The new owner shall notify the Director, Valley Region, of the change of ownership within 30 days of the transfer.

(9 VAC 5-80-1240)

65. Permit Copy - The permittee shall keep a copy of this permit on the premises of the facility to which it applies.

(9 VAC 5-80-1180)

SOURCE TESTING REPORT FORMAT

Cover

1. Plant name and location
2. Units tested at source (indicate Ref. No. used by source in permit or registration)
3. Tester; name, address and report date

Certification

1. Signed by team leader / certified observer (include certification date)
- * 2. Signed by reviewer

Introduction

1. Test purpose
2. Test location, type of process
3. Test dates
- * 4. Pollutants tested
5. Test methods used
6. Observers' names (industry and agency)
7. Any other important background information

Summary of Results

1. Pollutant emission results / visible emissions summary
2. Input during test vs. rated capacity
3. Allowable emissions
- * 4. Description of collected samples, to include audits when applicable
5. Discussion of errors, both real and apparent

Source Operation

1. Description of process and control devices
2. Process and control equipment flow diagram
3. Process and control equipment data

* Sampling and Analysis Procedures

1. Sampling port location and dimensioned cross section
2. Sampling point description
3. Sampling train description
4. Brief description of sampling procedures with discussion of deviations from standard methods
5. Brief description of analytical procedures with discussion of deviation from standard methods

Appendix

- * 1. Process data and emission results example calculations
2. Raw field data
- * 3. Laboratory reports
4. Raw production data
- * 5. Calibration procedures and results
6. Project participants and titles
7. Related correspondence
8. Standard procedures

* Not applicable to visible emission evaluations.